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MR. MORTON EXAMINING ARCHIE'S FIRST LITERARY PRODUCTION.

ARCHIE CAMPBELL;  
OR, THE POWER OF THE ALPHABET.  
CHAPTER VII.

The postal communications of some years back  
were not made with the ease, regularity, and rapi-

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dity which characterise them in the present day,  
when, by the wondrous powers of steam and rail-  
ways, we can almost realize the poet's wish to

"Annihilate both time and space,"  
when friends would fain be united either personally

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or by letter. Archie's long explanatory epistle to Ellen Morton took as many days to reach London, as the journey there and back to the furthest point of Scotland would now be traversed in; and consequently the intelligence it conveyed of his late elevation in the favour and service of the Duke of A—— was not received by her until her father had set off on a hasty round of farewell visits to old and attached friends, prior to his leaving England for an indefinite period.

Ellen and her mother were both much pleased at the advancement of their young friend, and the former sat down directly to write Archie such a letter as might have been addressed by an affectionate sister to a brother whom she respected as well as loved, and yet in which the natural playfulness of her disposition frequently broke forth.

"I am sincerely gratified to hear of the merited reward of your self-reliance and perseverance," she wrote; "it is what I always felt sure would come; and if you continue the exercise of both, no doubt other good results will follow. And so you are an *Author*, Archie! How fine and grand it sounds! To think of the 'big rude boy' that I was so indignant with, eight years ago, for not letting me pluck all the pretty flowers he had taken such pains to cultivate, being grown up into a learned young man who translates Latin books! It is perhaps as well that we don't meet just at present, for I suppose I ought to be very respectful to you, look grave, and make you a very low curtsey, when '*My friend Mr. Campbell*' was presented to me by the Duke; but I fear, Archie, instead of that, I should feel inclined to burst out laughing, and to say, 'Put away all your dry learned books, and come and have a ramble with me and papa over the hills.' It will be many a long day, however, before we ever have an opportunity of doing that again; and even if we ever do meet at beautiful —, you will be most likely sobered down into a grave learned man, with a wife and bairns about you, and I shall perhaps come home from India with a rich husband as yellow as his own rupees, but nevertheless a good man, Archie, or I won't have him."

Whilst Archie was reading this letter, Mr. Baird knocked for admittance; and on entering the cottage, his young friend recapitulated what he had already read, and finished the perusal aloud. It concluded with the kindest wishes, a request for him not to forget his friends, and a repetition of her injunction for him to keep his favourite motto, "Hope on, and work on," etc. etc.

Mr. Baird remarked that "the letter did credit to Miss Morton's head and heart, and that he did not doubt she would be a comfort and blessing to her parents in their distant home. When were they to sail?"

Archie did not know; he hoped to hear from one or other of them again; and he interrupted a subsequent interesting conversation on different topics, to receive, through the lips of a servant, an immediate summons to the presence of the Duke.

"Here are some books just come from Edinburgh, which I want you to unpack, Campbell," said his Grace, as he entered the library; "open that box, and let us see what Mr. B. has sent us."

And the literary treasures were soon piled on the table by his young companion.

The Duke looked at their titles, opened one or two, and made running comments on their authors and contents.

"Ah! here is a translation of the great —'s Latin work," he exclaimed, "and by a nameless author! It seems cleverly done; I have seen it well spoken of in the reviews. I wonder who it is by?" And he placed the volume in the hands of Archie, the tell-tale flush on whose cheek partly revealed the secret.

"You know something of this work?" said the Duke, hastily.

"It is my first literary attempt, your Grace," he answered, with modest truthfulness; "but I did not wish to name it until I heard what opinion it would obtain."

"You are a wonderful fellow, Campbell, and I honour and respect you," was the generous outburst in reply; and the truly noble man shook his dependent's hand in hearty fellowship.

Two days afterwards an unexpected pleasure awaited Archie, as he sauntered up from his little cottage to the castle. A travelling carriage drove up to the door, and Mr. Morton descended from it, who, immediately recognising the young man, extended his hand, which was grasped in eager warmth and welcome.

Entering the castle with him, whilst a servant went to announce his arrival to the Duke, Archie heard, in a few brief words, that Ellen and her mamma had resolved to sacrifice inclination to duty, and to remain quietly in town to complete their preparations for the voyage, whilst he had been making a sort of farewell tour amongst his friends, and had come down to bid adieu to the Duke of A——, as one of his oldest and most respected patrons, and to thank his Grace in person for the share he had had in his appointment.

His communication was made in the same courteous manner as heretofore; but Archie felt, as he had ever done, that Mr. Morton "came so far and no farther." There was neither the full gush of sympathy and almost parental feeling which flowed from the heart of his venerable friend Mr. Baird, nor the generous withdrawal of the barriers of rank and position, and the free welcome into the circle of intellectual equality, which had been so gracefully shown by his noble patron.

Mr. Morton was a benevolent man, and did many an act of kindness and philanthropy. He also always recognised merit, and in many instances assisted it when found in circumstances where a little encouragement nurtured its growth and ripened its fruits; but he could not quite overcome the prejudices of birth and station; and he had not only expressed these feelings, as we have seen, when speaking to his daughter of her then anticipated visit to —, but now exhibited a little of the same restraint towards Archie himself, which somewhat chilled his own pleasure at their meeting.

Archie had observed that Mr. Morton looked rather surprised at the familiar way in which he followed him into the castle, and also seemed struck with the change in his dress; his answer to Archie's question of, "How long had he been absent from home?" showed that he had not received any communication of his young friend's

change of circumstances; and therefore, we fear, with a little of that feeling which apes humility, the latter withheld an immediate communication of his rise in the scale of society, and respectfully left the room as Mr. Morton quitted it to proceed to the presence of the Duke.

But, a short struggle with himself enabled Archie to decide that he *ought* to tell of his elevation to the first gentleman who had shown kindness to him, and he therefore resolved to do so before they should meet in such changed relations at the dinner-table.

The Duke, however, who enjoyed a harmless joke, and thought it also a good opportunity to give a quiet rebuke to what he knew was Mr. Morton's besetting fault, saved Archie the necessity. Soon after he had greeted his guest with a hearty welcome and friendly inquiries, and talked over his intended plans for a voyage to and sojourn in the East, he turned to the library-table, and, taking up Archie's book, said: "By the by, Morton, have you seen this translation of —'s work? it is exceedingly clever."

Mr. Morton glanced at it. "It seems so, indeed," he said. "Does your Grace know the author's name?"

"Yes," replied the Duke, carelessly; "it is by my *under gardener*, Archibald Campbell."

Well might Mr. Morton start in astonishment. Such a work translated by a self-taught shepherd boy! an uneducated rustic! it seemed almost incredible; but a glow of shame overspread his face as he remembered the words he had so lately addressed to his daughter, and the prognostic she had uttered in return; and with true magnanimity, he almost directly afterwards sought Archie, and cordially congratulated him on the well-merited reward of his diligence and perseverance.

"But you must not remain in such an inferior position as that of a gardener," he added; "even my slight influence can provide something better for you before I leave England."

But when Archie, with modest gratitude, told of his present position with the Duke, Mr. Morton felt indeed that his Grace was his superior in more respects than one.

Two more days passed in happy, confidential intercourse; and then, laden with Archie's good wishes for his wife, and messages of the most sincere friendship for his daughter, Mr. Morton departed for London, promising that his young friend should hear from him again before they sailed.

Scarcely had he left when a message came from the Duke, who wanted "Mr. Campbell" immediately.

His Grace awaited him in the library. "I have an unpleasant letter here, Campbell. My private secretary in town has been obliged to leave me at a moment's notice, in consequence of the dangerous illness of his father, who is abroad. I shall be overwhelmed with correspondence when I get back, and shall neither have time nor inclination to seek another confidential person for the present. Will you oblige me by stepping into the gap *pro tem*?"

Archie was overpowered with grateful surprise. "If your Grace thinks me capable—" he began. "Oh! yes, yes, thank you: well, then, you

must hold yourself in readiness to go to England with me the week after next." And without waiting for thanks, he quitted the room, making it appear that he had received an obligation instead of having conferred one. Here again shone *true nobility*.

Archie's head nearly swam round. Another step was gained on the ladder of promotion! What would his dear friend Mr. Baird say? In a short time they were together, in the old "litter room," and the late interview was detailed.

"God is very bountiful to you, my son," said the old man fervently; "forget not to own him as the author of all your blessings; for remember, every good and every perfect gift cometh down from him."

Never did the venerable pastor neglect an opportunity of inculcating holy lessons, and on his present grateful hearer they were not thrown away.

The next morning the Duke set off early, on his visit to the islands, and Archie employed many hours in writing long letters to Mr. Morton and his daughter, telling them of this new advancement in life, through the kindness of them and his noble patron. His similar communication to James Muir was dictated by an equally friendly and grateful but somewhat mingled feeling. He hoped he would not confine the news to his own immediate circle, unless Mary Barnes still formed a member of it, though he did not actually express that hope.

The period fixed for the return of the Duke was drawing nigh, and Archie had consequently made all his arrangements for quitting Scotland for an indefinite period, when one morning the post-bag contained a very voluminous letter, addressed to him in the well-known hand of Mr. Morton. Proceeding to his own little study, according to his usual wont when particularly interested, he broke the seal, and found the envelope contained not only a long letter from Mr. Morton, but a short one from his daughter. Perhaps Ellen had fancied he might give her communication a preference, and therefore she had written outside, "Read papa's letter first," which request he immediately obeyed.

After a friendly commencement, proving the sincerity of his regard, and the interest he felt in Archie's advancement, Mr. Morton went on thus: "And now, my young friend, you must not be offended at my giving you a few cautions, at the same time with continued encouragement. Persevere in your career of self-reliance and self-education, but beware of making the instruments of your elevation become your idols or your snare. You have had many talents committed to your charge, Campbell; see that you use them *all*, and use them *well*; for mere intellectual attainments will prove valueless, or worse, unless they are devoted to the cause of virtue and of truth, and the glory of the Giver. One especial reason for my thus writing to you is, that I have within the last few days seen a sad instance of the danger incurred by the improper use of great mental acquirements. I do not imagine for one moment that you will ever fall into such gross errors as those detailed in the inclosed narrative (for I hope and believe that your principles have too firm a foundation); but still, its perusal may induce you to be still more

watchful, and prevent your regarding mere earthly knowledge as an end, instead of a means.

"On my return to town last week, I found many letters awaiting me. One of them was in a strange hand; and, opening it, I found a request that I would call on the writer, who, it stated, was 'a foreigner, poor, friendless, and dying.' I could not resist such an appeal. I went to the house, a miserable abode in a crowded court of one of the worst localities of London, and I found the outline so briefly sketched most painfully filled up in its details of reality. Poverty, sickness, friendlessness in a foreign land, all were there, with no amelioration but the devotion of a loving, devoted wife. I spare you particulars, my young friend, which would only wring your heart, without producing any benefit to the afflicted ones. Suffice it that I was happily permitted to rescue two fellow-creatures from great misery, and into which I think it unlikely they will again fall.

"The memoir, so to speak, of the highly-gifted man so strangely introduced to my notice, was written down from memory the same evening I had heard it from his pallid, faltering lips; and it struck me, it might serve a good purpose if I inclosed it to one whose aspirations after mental superiority I have so lately proved to be dauntless in its pursuit. Knowing your truthfulness, I rely confidently on receiving the candid impressions produced on your mind by Monsieur Duval's story, and of the resolutions you may form in consequence."

Archie felt intuitively that Mr. Morton wished him to read the narrative in this place; therefore he laid down the letter and took up the inclosure. It was entitled, "THE STORY OF A CLEVER BUT MISGUIDED FRENCHMAN," and ran thus:—

"My name is Edward Duval. My father had followed the profession of the law, with very prosperous results, in the luxurious town of Lyons, and having also a small patrimonial estate in the neighbourhood, retired early into private life, and wished me, his eldest son, to succeed him in the career which had proved so successful to our family for two generations. I had good natural talents: they had been cultivated, as far as possible, by a tutor who resided in our house; but at the age of sixteen he found his pupil was up to him in classical knowledge, and far beyond him in that of the world; for my associates had been youths older than myself, who had too early initiated me into vice and extravagance.

"Still, I had a genuine thirst for learning, which these foolish pursuits could neither slake nor prevent, and my father therefore willingly adopted the advice of a friend, and sent me to the college of St. Louis to complete my education.

"Here I speedily became imbued with those sceptical opinions which the talents and reputation of the renowned Voltaire, (who had there received his instruction,) still rendered alluring in the eyes of too many succeeding pupils. Human intellect was cultivated for scarcely any other purpose than that it might exalt itself against the great Author of humanity; knowledge was accumulated to be again spread forth with all the deleterious mixture of infidelity; languages were acquired that they might be the vehicles for more widely disseminating impiety and the doctrine of man's freedom

from accountability. Reason was elevated, as a goddess to be adored, instead of an attribute to be enlarged; and religion was scoffed at and trampled on as the strong weapon of a hypocritical faction, the bugbear of the ignorant, and the last refuge of the disappointed.

"What wonder that in such a tainted atmosphere the little principle I once had sickened and died, and all my evil tendencies grew rank with a visible rapidity. In all intellectual contests I bore off the prize; my essays were sure to receive approval and reward; my eloquence became the theme of wonder as well as praise, and at twenty years of age I was sated with adulation, and disgusted with the conviction that I knew more than many of my preceptors. I wrote graceless speeches for my less clever companions to spout at their evening rendezvous; I attacked religious professors whenever I had an opportunity—and the licentiousness of many of the clergy gave ample room for such, and never did I feel so pleased as when I thus showed up the hollowness of their system. But I now learned to acknowledge that it was the system which was in fault, not Christianity, which they so wickedly made use of as a cloak to hide their gross and flagrant sins.

"Feeling an utter distaste for the dry details of the law, partially consequent upon the example of the man whom I had made at once my idol and my model, I turned my whole attention to the cultivation of the *belles lettres*, and published several poems with some success; but my vanity had become so egregious, from the fulsome and inflated praises of my companions, that I thought myself equal, if not superior, to what Voltaire had been in his day; and I imagined I had but to make myself known in England, to find the same patronage and attention. At the age of twenty-six I made the experiment, but I soon discovered my mistake.

"I had not brought with me letters of introduction to any person of consequence, and the ill feeling which was beginning to be engendered between the two countries, prevented my receiving much encouragement from the literary men to whom I applied. However, for some time I received regular remittances from my father, and thus, being independent of a profession, I at least found plenty of associates, who gladly initiated me into their coteries, and, alas! in too many instances, were willing to profit by my lessons. I thus lived for some years a life of extravagance and worse than idleness, because I prostituted my talents to the worst of purposes, endeavouring to erect vice and immorality on the ruins of conscience.

"The intelligence of my father's dangerous illness recalled me to France, and the sight of his death-bed somewhat staggered me in my infidel principles; for I felt that at that moment no hypocrisy could be practised, no illusion could blind. My poor father, who belonged to the despised party of the Protestants, had a simple but firm faith in the doctrines of Christianity; and the bright smile which lighted up his wrinkled face at the moment of dissolution, went further towards making me believe in a future state than any arguments I had heard from his lips when living.

" Soon after his death I sold my little patrimony, and returned to England, hoping to make my literary powers the means of subsistence; for I knew that the subjects I now chose for my pen were such as might prove useful to the scientific, and at least innocuous to the religious, world; but I was unsuccessful, and perhaps deservedly so.

" I had been accompanied to this country by my poor Pauline, whom I married in a moment of impulse, but which I have, save for her own sake, never regretted; for she has been faithful and affectionate in all the downward steps of my career, and I would fain commend her to your care when I am dead. To her prayers, to her simple but heartfelt allusions to the truths of revelation, I am indebted for the few stray beams of light which have visited my soul since I was 'smitten with a sore disease.' She had a virtuous mother, and the lessons of her childhood are now the solace of her later years. I have spent my patrimony in extravagance and frivolity, and have brought my poor wife to poverty, and myself to an untimely grave; my race, too, is nearly run. I only strove to win the prize of *earthly* knowledge and distinction, and I succeeded; but what has been the result? I have gathered the fruit I longed for, and it has turned to ashes in my hand."

Archie had read this story with the deepest attention and interest, and had made his own reflections on it, and his consequent resolves, contingent upon a heavenly blessing, which he silently but earnestly implored; and now he turned to the conclusion of Mr. Morton's letter.

" Such, Campbell," it continued, " was poor Duval's sad confession, which made an impression on my mind I would willingly transfer to yours. It seemed to realize completely the words of St. Paul: ' Though I speak with the tongue of men and of angels, and have not charity, I am become as sounding brass or a tinkling cymbal.' What had availed all his vast acquirements—his speaking of tongues—his vaunted knowledge? Having, as he had acknowledged, been deficient in every practical proof that he possessed 'charity,' or Christian love, which is greater than all these, they had proved neither useful nor valuable, and had become his bane, instead of his blessing. Think of this, my young friend, when you are continuing your studies. It will not make you less diligent, but it may perhaps awaken and stimulate a higher motive for mental culture than the mere wish to possess the praise of men."

The letter ended with most friendly expressions of good-will, both from Mr. Morton and his wife, and a hope that they might some day meet again.

Ellen's epistle was very short, but to the purpose. After warmly congratulating Archie on his rapid success in life, she lightly touched on the sad story contained in her father's letter, naming how much her mamma and self were interested in Duval and his faithful, uncomplaining wife, and then she added: " And now, Archie, let me thank you for all your good wishes, and for your too eloquent expressions of gratitude for kindnesses received at our hands. The former I return very sincerely, and the latter you may some day have the opportunity of repaying by actions instead of

words, which I know will gratify your generous feelings; for remember the fable of the mouse and the lion. None are so humbly placed but they may rise to be benefactors to their fellow-men; and none so highly situated but they may at some time need assistance."

She then gave a playful injunction that he should instruct his successor to keep her garden in order, in case she should any day arrive unexpectedly at — from her distant home; and concluded with an affectionate and touching "farewell."

Archie was much affected by the perusal of both these letters, and took counsel with Mr. Baird on their contents.

" You can do nothing better, my dear boy," said his old pastor, " than to thank your friends for their interest in your life progress, and to promise that, by God's assistance, the lesson Mr. Morton has sent you shall not be thrown away."

#### SECRETS IN CIPHERS, &c.

SOME few years ago one could not take up a "Times" newspaper many consecutive days, without encountering, at the head of the third column, a paragraph or two of greater or less length, which were not only unintelligible to ordinary eyes, but utterly unpronounceable by mortal tongue. Some of them read, for instance, thus: *byqxfsgd rmfp ntgmf*, and so on through eight or ten lines of the small print. Others avoided or renounced the letters of the alphabet altogether, and were couched only in such other typographical signs as the printer has at his command, and piqued our curiosity with such displays as *† \* — § + ) ||*  ; *8 x*, also to an indefinite length: and again, a third class of them dealt only in figures, proclaiming their secret to the expectant correspondent in such terms as *52385 4796 138546372*, and so forth.

At the first glance we would imagine that the secret thus wrapped up would be safe enough from the cognizance of uninterested parties, and might securely defy the inquisition of the curious. Not so, however. It is a maxim in war, that any besieged stronghold must in the end surrender if the besiegers persevere in their attack; and it is a maxim with decipherers, that any puzzle of this kind, how ingeniously soever it may have been devised, must eventually disclose itself to the indefatigable inquisitor. And such, in fact, is the case; ingenuity in the construction of a cipher may delay but cannot prevent its discovery: it is only a question of time; and as time is an article of which the curious have generally plenty to spare, it follows that secrets thus confided to the press under these imagined safeguards have become patent to numbers, and thus served to defeat instead of to forward the objects of their publishers. Nor is there much cause for lamentation here. It is within our own knowledge that correspondence of an infamous nature has thus been carried on and discovered, and that more than one decipherer has made a market of his skill, by threatening to disclose the secret to the injured party, and receiving hush-money as the price of his silence. We also distinctly remember reading an advertisement couched in a most difficult cipher, which was itself

a warning to those who had long used it in the "Times," to discontinue their criminal correspondence, under penalty of complete exposure should they refuse to do so. We need scarcely add that the correspondence *was* discontinued.

A glance at the mode in which these ciphers are sometimes constructed may not be uninteresting. The simplest form is that in which the letter preceding or following it in the alphabet is used instead of that intended to be read; thus, in the latter case, the words "come to-morrow" would be represented by "*dpnf upnpsspx*"; we give this, however, only as an illustration, as no person advertising in the public prints would be silly enough to resort to a puzzle known to almost every schoolboy. The difficulty is but slightly increased when the alphabet is reversed, when *z* represents *a*, *y* stands for *b*, and so on; but when an arbitrary exchange is made of the several letters, it will take a decipherer much more time to get possession of the key. But even in that case, success, with perseverance, is certain. The first step towards discovery consists in guessing at certain short words and rejecting the suppositions which prove to be false. The words of our language consisting of two or three letters only are not very numerous, and, however disguised, will not long remain undiscovered. Success with one word renders the solution of the next easier, and the inquirer has rarely to plod through more than a couple of lines before the entire riddle becomes patent. The difficulty is not enhanced a whit by the substitution of arbitrary characters instead of letters.

The following is a list of the characters sometimes used, and they are evidently selected because they are to be found among the types of the printer. We will place them in the order in which they may be supposed to stand, to represent the entire alphabet—thus: *I a + b 8 c \* d a e — f \$ g ; h + i a k || l 5 m ¶ n 2 o & p , q - r + s x t : u - v ) w . x ( y = z*. A communication in this character looks very difficult, but the difficulty is more apparent than real. The following short sentence, for instance, seems inexplicable: (2) ~~2~~  
\**a + x + ) + || + a & l + \* × 252* ~~2~~  
If the reader tries to get at the sense of it without referring to the key, he will probably fail, unless he have been well used to such experiments; but an old hand at deciphering would pause but a short time over it before he had mastered its signification. He would go to work in this way: passing the first two words of four and five letters, he would note that the third and fourth were composed of four and two; the third has the two last letters alike, and he would not be long in discovering, by reference to the context, and comparison with other terminations, that these final letters are double *l*. But what are the other two letters? Is it the word tell, fall, fill, bell, or will? How is he to find out? He examines the other words, and sees that one of them, having eight letters, ends with the same that begins the third; further, he observes that one of its letters is repeated once, and another of them twice. There are very few words that will answer to this description: he tries a few, and soon hits upon the word "to-morrow," which gives *w* for its own final letter and the initial of the third. The third is therefore either *will* or *well*, and he settles that

the fourth is *be*. Recurring now to the first word, he finds that of its four letters he has deciphered two, *o* and *r*, and he feels pretty sure that the whole word is *your*. The sentence now reads to him, "Your — will be — to-morrow." We need not follow the process by which he fills up the blanks, and arrives at the information that the unknown correspondent's *debts* will be *paid*, and the unfortunate man may emerge from his hiding-place and return to his disconsolate family.

Ciphers composed wholly of figures present a greater difficulty, but a difficulty which is just as sure to be surmounted in the end by a persevering investigator. The puzzle seems unfathomable at first sight, from the fact that there are but ten figures to represent the entire alphabet of twenty-six letters. This formidable obstacle is, however, easily got over: in constructing a figured cipher, the alphabet is first cut down by the rejection of useless letters, and the figures are doubled, or nearly so, in number, by using one of them as a prefix only. For instance, the alphabet, in its simplest figured form, might stand thus: *2a 3b 4c 5d 6e 7f 8g 9i 0l 12m 13n 14o 15p 16r 17s and z 18t 19u 10w*; the letter *c* would be used instead of *k*, and the aspirate ' would serve for the *h*. Written in this character, poor Richard's homely maxim, "Haste makes waste," would stand thus: *'217186 1224617 10217186*. It may be conceived that even in this, the simplest form, the deciphering of a document of which the key was not known would be a work of sufficient labour; but that labour is infinitely increased when the figures, instead of standing seriatim in the key, are irregularly mixed, and the prefix is perhaps doubled or trebled. But precautions still more ingenious and complex are sometimes taken to prevent discovery; thus, in figured ciphers it may happen that the prefix may be made to occupy certain situations indicating to the initiated that the word in which it occurs is a word of no signification, but mere nonsense; or it may indicate that such word carries negative before it, and is to be understood in an opposite sense.

It seems odd to assert that all these ingenious devices stand open to discovery; but really nothing is more certain than the fact that it is impossible for any man to devise a riddle of this kind, which another, with leisure and opportunity at his command, shall not be able to solve. So well is this fact known and recognised among those interested politically in secret communication, that the use of ciphers, obviously such, began to fall into disrepute even more than a century ago. It was found that, however complex the literal puzzles contrived, men were to be found who, having made the art of deciphering their study, were always ready and able to translate them into intelligible language. It was this conviction, probably, which gave rise to a new class of ciphers, not obviously such, but to all appearance letters of courtesy or ordinary business, which, even if they fell into the hands of open or concealed enemies, conveyed no information, and if they were not forwarded to their destination, were at least cast aside or destroyed as worthless. These letters were variously contrived. In some, the first period was a key to all that followed. Thus, if the missive began, "Since the tenth of last month I have not received

a line from you," the correspondent would understand that as the first word contained five letters, the fifth word in the following paragraph would be the first of the real communication; the second word containing three letters pointed to the eighth word as the next to be read; the third, containing five, pointed to the thirteenth, and so on. The construction of such letters as these must have been a work of considerable study and ingenuity, as it was necessary to make them read intelligibly, and to convey some surface information independent of their secret contents; and if these were done in a clumsy manner, and the missive fell into hostile hands, suspicion would be excited, and perhaps its real purport be discovered.

After the expulsion, or rather flight, of James II from his kingdom, the Jacobites, who plotted day and night to bring about his return, racked their brains incessantly in contriving the means of secret communication. They resorted to sympathetic inks, by the use of which the real writing remained invisible, while a complex cipher written between the lines in black ink, but which had really no signification, was made use of to perplex the deciphers. It was a device of this description that was made use of by Mary of Modena, in behalf of James, in 1690, when she despatched her treasonable papers sewn up in the buttons of her two spies, Fuller and Crone. Fuller, a traitor to the Jacobites, carried his letters at once to William at Kensington. Ostensibly they contained nothing of importance; but on the application of a testing liquid, words of the gravest import became legible. Crone was sought out and arrested, was tried and condemned to death, and only saved his life by a confession which inculpated the guilty parties.

Another device of the Jacobites was that of writing in parables. This was playing the game of treason at a cheap rate; because, though the purport of such letters might be easily guessed, the crime of the writer remained incapable of legal proof. Macaulay, in his History, gives some samples of this kind of correspondence. One of the letters, couched in the "cant of the law," ran thus: "There is hope that Mr. Jackson will soon recover his estate. The new landlord is a hard man, and has set the freeholders against him. A little matter would redeem the whole property. The opinions of the best counsel were in Mr. Jackson's favour. All that was necessary was that he should himself appear in Westminster Hall. The final hearing ought to be before the close of Easter Term." The real signification of this is too obvious to escape recognition by the simplest reader; but yet it is not actionable in law. Mr. Jackson, of course, is James II; his estate is the kingdom; the new landlord is William; the freeholders are the men of property, etc. etc.—the whole being an invitation to James to make a descent on the coast with a French army ("a little matter") before the end of Easter.

Another device of that time was one which confined the signification of a missive to certain letters only, and which could only be discovered by the person who had the key. Thus, if it was required to inform a prisoner that his accomplice, on being tried in court, had not betrayed him, it might be done by the following lines, inserted as

the second or third paragraph, according to agreement beforehand.

"I have but time for a few words. Rejoicing that you are so well treated, I hope to hear that you are better. Can you not write soon? even a word will be welcome to your poor wife; so soon as I hear from you I shall communicate with your friends. If Sarah comes to London, I may accompany her to see you. This is not certain, and may not take place. I know little news, though much is stirring, but I live much secluded. If Harry were here, he I warrant would know all. Venn came last night and desired to be remembered to you; if good wishes could set you free you would be soon at liberty."

The secret information contained in the above paragraph is far more secure from discovery than anything written in cipher. The governor of the gaol, who had read it, would in most cases unhesitatingly pass it to his prisoner without suspicion; but the prisoner, who knew the key, would also in a few minutes know, by simply reading and putting together every third letter after a stop, that his accomplice *Jones said nothing* on his trial that could implicate him—a piece of information which the governor of the gaol would, in a case of treason, be the last person to impart.

One other device we shall notice, which, though not of much use to a prisoner strictly searched on his incarceration, has yet been at various times largely used by secret correspondents. The writers agree to use paper of a certain size and shape, and each of them retains a card similarly perforated in various places. The real news which the writer has to convey is first written on that part of the paper left uncovered when the card is laid upon it. It may run, for instance, thus:—

Fox  
has  
played  
The  
knaves  
is  
known.  
all

That would be the information conveyed, and would be all that was legible through the holes in the perforated card when that was laid upon the sheet. The writer, having thus written his news, would proceed to conceal it from any person into whose hands the letter might fall, by filling up the interstices with other words of a commonplace kind; as, for example, thus:—

"We had a good run after the fox yesterday over the moors. Berwick has sold his hunter; the jade played him a trick that nearly cost him his life. The next hunt comes off in a fortnight; my knave tells me it will be a grand affair. All the gentry of the country will be there; the day is fixed, and the sport is expected to be the best ever known. You will not fail to be on the ground."

Such a paragraph would evidently excite no suspicion, and it is plain that the secret intelligence could only be read by one in possession of the perforated key-card.

Ciphers and the various modes of secret writing were for a long time almost the exclusive devices of spies, plotters, traitors, warriors, and diplomats. To what extent they are used by the

same class of persons at the present moment, we are in no condition to affirm—our experience lying out of the walk of diplomacy of all kinds. Yet have we seen in our own day something analogous to ciphers and secret writing used pretty freely, in defiance of the post-office and his then majesty's exchequer, before the days of cheap postage. When the carriage of a letter cost a shilling or tenpence the hundred miles, we have more than once or twice seen a working man who could not afford the charge of postage, carefully inditing an epistle to a friend by simply dotting, almost invisibly, the letters he wanted to make use of, through the long close column of a parliamentary debate in an old newspaper, which would travel the distance for nothing, by virtue of its stamp. The receiver would spell the words of the communication by the dotted letters, and would do it rapidly after a little practice. Newspapers also, untouched by the pen, were frequently used instead of letters, in accordance with a preconcerted arrangement. This fact was well known to Rowland Hill, to whose persevering address we are indebted for the penny post system. He was once travelling through the wastes of Cumberland, when he saw the postman carry a letter to the door of a poor woman's cottage. The woman took the paper in her hand and returned it to the postman: the postage was over a shilling, and she had not the money to spare. Mr. Hill, feeling for her poverty, produced the money; and notwithstanding her very marked and to him unaccountable unwillingness that he should do so, handed it to the postman and gave her the letter. When the postman's back was turned, she opened the letter, and, handing it to her intending benefactor, showed him that it was nothing but a blank sheet. An explanation ensued, from which it appeared that, as neither she nor her husband could afford to pay the price of postage, they had agreed to send each other, at intervals, a blank sheet, the offer of which, for delivery by the postman, would be a signal that the writer was alive and well. We need hardly say that all such speculative practices as these were excusable on no conceivable grounds: one good result of cheap postage is the removal of all such temptations to a breach of honesty.

We shall close our notice of this curious subject by transcribing a couple of ciphers which any reader who feels that he can conscientiously expend time on such an object, may solve at his leisure. Those who have seen them before will pardon their introduction here, for the sake of those who have not. The first was inscribed over the tables of the Decalogue in a country church, and is said to have remained undiscovered for two hundred years. It runs thus:—

PRSVRYPFRCTMNVRKPTHSPRCPTSTN.

The second originated in a request from a charming young lady to Professor Whewell, that he would exercise his ingenuity in constructing for her a cipher which nobody should be able to unravel. The professor took a slip of paper, wrote a few lines and handed them to the lady, who read as follows:—

" You O a O but I O thee,  
O O no O, but O O me,  
O let not my O a O go,  
But give back O O I O thee so."

#### THE OVERLAND ROUTE TO INDIA.

NO. VIII.—CAIRO TO SUEZ.

ON our arrival at Cairo, we immediately went to the Transit Office, to ascertain when the vans for the desert would start.

" The first lot leaves at one in the morning," was the reply.

Axious for rest, and a sight of this famed city in broad daylight, we begged for delay.

" No."

We argued and protested; but all in vain. " Gentlemen, by orders of the Pasha, the first carriages start at one o'clock; the others, two hours later. You may go, or not, just as you please."

There was no appeal; we were compelled to submit. As my party were appointed to the first batch of carriages, I rested as I best could during the short interval; and as near as possible to the time fixed, up drove our vans to the entrance of the hotel. They were five in number, each with six persons inside—a very tight fit; a driver seated in front, and a groom behind, and each van drawn by four little Arab horses, fresh and frisky in the extreme. As soon as we were seated, according to the arrangement made on board the " Ripon," off sprang our steeds at a gallop. Torch-bearers accompanied us as when we entered the city—Egyptian lads carrying on a long pole iron cradles filled with blazing wood—running and vociferating as we dashed along. The flickering light from the rather primitive flambeaux, though necessary enough to guide us along the rough and tortuous road, mortified rather than gratified the passengers, as we could only catch a glimpse here and there of what we so much wished to explore. Soon we were beyond the city walls; the torches were extinguished, the noise ceased, and we plunged into the dreary desert, part of "that great and terrible wilderness" in which God's ancient people sojourned for so many years.

Our first and second stages, of about five miles each, were passed in darkness. In the clear sky the stars were twinkling, but the light was not enough to make the desolation visible. Our poor groom had his bare foot severely hurt by a tread from one of the horses. He rode behind us, moaning pitifully, which, as we could give him no relief, added much to the dreariness of that dismal part of our journey. Fortunately for them, my companions fell asleep. As for me, though wearied beyond measure, I was too excited to sleep. I tried to soothe the sufferer, gazed into the vacuity around, and " wished for the day."

As the morning dawned, the desert in all its dreary desolation gradually opened to view. As far as the eye could reach, there appeared one vast expanse of arid sand. Not a tree, or a shrub, or a leaf was visible; not a well, a pool, or a drop of water. Mother Earth I never beheld in aspect and attire so lugubrious. Huge skeletons of dead camels were the only objects to mark our progress. For a time I tried to count them, but found it impossible—so many "ships of the desert" having founded on these inhospitable sands. After a long, cramped, wearisome drive, our vans drew up at the first rest-house in the desert. Gladly we dismounted to stretch our stiffened limbs, and



VIEW OF SUEZ, COPED BY A FLOCK OF MIGRATING BIRDS, AND THE YORK LAND.

partake of the hospitalities of this singular *restaurant*. These station-houses we found very tolerable, and the provision made for us as good as could well be expected : a comfortable ablution, and repose for an hour on the sofas with which the rooms were plentifully furnished, were luxuries most refreshing. I did pity the sad lot of the keeper of this hotel. He was a European. As I was leaving, he asked if I could give him a book of any kind ; his supply was scanty and exhausted, and his terrible isolation he could scarcely endure. Allowed only the smallest quantity of luggage during the transit, I, unfortunately, had no book I could spare. But I happened to have an old supplement of a weekly journal, containing reviews of Dr. Chalmers' *Life*, and of many other instructive publications. This I offered him ; with many hearty thanks he received it, esteeming it quite a treasure. Tracts and good books might be distributed at the stations with great advantage. Such "streams in the desert" might oft refresh the weary traveller, and guide the wanderer to the better land.

Our starting afresh from these rest-houses was often a scene of great excitement. There stood our five vans, with their twenty fiery Arab steeds, snorting, tossing their manes, and pawing the sand, all eager for the race. The whole cavalcade was in charge of an Egyptian equerry, mounted on a beautiful Arabian horse which seemed to luxuriate in the air and liberty of the desert. This person is appointed by the Pasha to see that time is kept, and everything properly managed. Certainly, the horsemanship of this official, as he bounded over the sandy plain, keeping us together and urging all on, was the most perfect thing of the kind I had ever beheld. No easy matter was it, especially for ladies, to mount by a high rickety step to our van, and then squeeze ourselves into our confined seats ; but, to start fair, that was the difficulty. Our little restive steeds reared and rebelled ; now plunging, now getting over the traces, now lying down in the sand ; one moment refusing to move ; the next, starting up, and darting forward as an arrow over the plain. What jolting and jumping ! I believe some springs were broken ; but this was our worst mishap ; and then, what racing we had ! Not accustomed to hunters and thoroughbreds at home, I was amazed at the fleetness of our tiny cattle. Some of them were mules ; related, I presume, to the " wild ass used to the wilderness, that snuffeth up the wind at his pleasure." Each van, when fairly started, seemed determined to be first. Sometimes we were driving two or three abreast ; sometimes widely scattered ; sometimes in perilous proximity and confusion. Once or twice the van my friends and I occupied stood still. Ere it could be started again, all the others were at the utmost verge of the horizon. At length, off shot our determined little furies, and never slackened their speed till they were foremost of all. In the excitement of the scene I forgot all my fatigue. During these freaks, which were often happening to some of our party, our horseman in charge was kept well employed. With what ease, elegance, and ecstasy did he, fleet as the wind, scour the desert plain !

We were fortunate in finding the desert peculiarly animated that day. Now we met an Arab

horseman, then a single camel with his solitary rider travelling with "measured step and slow." We often saw in the distance a long string of camels, one after the other, marching in Indian file, laden with the merchandise of the East. We came up to a large company of Bedouin Arabs ; their chief was conspicuous in the centre, distinguished by his umbrella, the only one in the host. His guards were in advance, armed with matchlocks and long spears ; his ghost-like women, covered up to the eyes, were riding on asses ; his numerous followers were spread far and wide over the arid plain. I could not but think of the day when this desert was crowded with the thousands of Israel ; when they "went up harnessed," not as a confused mass, but as regular squadrons, as they fled from Egyptian bondage. We passed encampments of Bedouins, who seemed to marvel as much at us, our equipment, and our hurry, as we did at them and their indolent repose. They fired a few shots as we flew past, just, perhaps, to remind us that they were warriors very clement and very kind to permit us to escape without levying their black mail. Well did they and we know that if they dared to molest us, the Pasha would soon see to it that they were made a head shorter. Instances of this kind, we were informed, had lately happened ; and we felt as safe as if travelling in Old England. Shortly before us a caravan of pilgrims had passed, and we met groups returning who had been conveying their friends who had gone at that season on their pilgrimage to Mecca.

The mirage we saw several times in great perfection. At one time the horizon was like the sea-coast, the ocean stretching out apparently as far as the eye could reach. At another it was like an arm of the sea jutting far into the land. At another, it was like a beautiful lake, studded with islands. So perfect was the illusion that one of our young cadets, certainly not the brightest that ever left Addiscombe, would not believe it was an optical delusion. He continued to maintain, with honest earnestness and pertinacity, that what we saw was water.

A line of wooden telegraphs at that time stretched across the desert from Cairo to Suez ; these we saw busily at work as we passed. At one of the stations we learned that the Indian steamer had arrived at Suez, and that we should soon meet the passengers for England. We saw a long line of camels conveying her Majesty's India mail across the desert to meet us at Suez. At the Central Station we dined, and rested for a couple of hours. Here I wrote a letter home, announcing our progress in safety thus far, and in twenty days the letter was safe in the hands of my friends in London. Soon we were off again with renewed strength and spirit. We saw the solitary acacia tree, called "the mother of rags," because here the pilgrims rest in returning from Mecca to Cairo, and suspend to its branches a piece of rag torn from their clothes. Ere long we met the passengers from the East. Of course we stopped and exchanged courtesies and the news. Some were from Singapore and China ; others from Ceylon, Bombay, Calcutta, and even Lahore. Delighted they were at the prospect of reaching home ; greatly did they pity us, bound for distant

shores. "India! India!" cried one, "*what* a country it is! But we are for England! Old England for ever!" For our comfort they added: "There's a noble steamer waiting for you at Suez." So, wishing each other all prosperity, we mounted our vans and parted, each starting off at full speed. After another short rest at the last station, the sun began to decline, and our desert journey to draw near its close. During the day the heat had been intense, but the air of the morning and evening was pure and delicious.

As we approached Suez, the scenery became bold and striking. On our right we had the lofty, barren, rocky mountains of Attaka, their rugged, jagged peaks most clearly defined in the bright azure sky. Above shone the young crescent moon and the evening star; their position, in immediate conjunction, and their peculiar brilliancy, attracted every eye. The crescent and the star, almost as they then appeared, form the ensigns armorial of the Pasha; and there they shone in beauty and splendour above these bleak mountains, as we were quitting his desert domain. I thought of the "fiery cloudy pillar" which guided God's hosts of old, when "they took their journey from Succoth, and encamped in Etham, in the edge of the wilderness." Near where I then was, this symbol of the Divine presence was conspicuous in that sky, "as a pillar of cloud by day, and of fire by night." Grateful did I feel that the same gracious Providence had watched over us in our brief sojourn in that barren land. Suez was now before us; the Red Sea came in sight! With what emotion you gaze for the first time on these waters! The rivalry of our vans, now that the goal was at hand, reached its climax, each straining every nerve to arrive first at the hotel. About seven in the evening we arrived safe at Suez. After a warm bath, which the sand and the fatigue of the desert rendered peculiarly necessary and acceptable, glad we were to retire to rest.

Next day was the Sabbath; but such a Sabbath I should not like again to spend. Suez is but a wretched place at the best; at this time the heat was awful, and cholera had recently been raging there most frightfully, which I believe was one reason why we were hurried so rapidly through Egypt. The population of Suez was about 3000; of these nearly 1500 had died within three weeks. Mortality, while we were there, was still prevalent; many of the dead were unburied; so that it was offensive and perilous to walk abroad. We kept to our hotel. In the morning we had a deeply interesting prayer-meeting, many of the passengers attending; but, how unlike the Sabbaths I was accustomed to spend! Our heavy luggage arrived, which we had not seen since we left Alexandria. What noise, confusion, and bustle! Camels march in with their ponderous burdens; there they stand, waiting the superintendent's orders; they kneel to have their loads removed, after which they lie down to rest their weary limbs, lifting up their melancholy countenances so piteously, as if imploring sympathy and relief. Arabs are bustling about, unstrapping boxes, carrying overland trunks, cracking long whips, shouting with all their might—more noise than work, more haste than good speed. Groups of Bedouins are sitting quietly by themselves, in

the midst of the uproar, enjoying their *chibouks* in dignified indifference. A guard of the Pasha's soldiers are here officially to keep the peace, not standing, but lying at ease in most unsoldierly confusion. Passengers are hastening from camel to camel, from load to load, each in search of his own treasures. In this heap you find one box, and yonder you descry another. Here you find your hat-box, and there your carpet-bag. All comes safe, however, except the leather straps which bind your trunks. These are invaluable to the Arabs, and they appropriate them universally. To me these pilferers acted with unwonted consideration; they took half of my straps, leaving as many as they purloined; for which kindness, when I saw the fate of others, I, of course, felt grateful. But the trial was to see our things pitched pell-mell into a huge native craft to convey them to our steamer. What crashing work was there! Down went a slender box, then a great trunk clamped with iron; here goes a mahogany gun-case, then a clumsy chest of drawers; now a strange-looking triangular tin-case, containing an assistant surgeon's bran-new cocked hat; then a ponderous package, which many Arabs can scarcely move, squeezing it most unmercifully. The sharp corner of a great box shod with iron pierced like a spear one of my leather trunks, making a most favourable opening for any sinister hand with nefarious intent. However, in the evening we and all of ours were on board the "Hindostan," riding at anchor on the Red Sea. It was a trying day; but the best remedy I found was to meet all with patience, resignation, and prayer.

#### THE BOAR'S HEAD FESTIVAL,

AT QUEEN'S COLLEGE, OXFORD, ON CHRISTMAS-DAY.  
HOWEVER self-possessed and self-loving we may have become during the year, Christmas time rarely fails to take us back in mind to the past, as it takes us back in person to the homes of childhood, and to those whom death has left us with whom to keep the feast; and so ever, at this happy season, we most of us

"Make one wreath more for Use and Wont,  
That guard the portals of the house."

"Old sisters of a day gone by,  
Gray nurses, loving nothing new,  
Why should they miss their yearly due  
Before their time? They too will die."

"Christmas-day in Oxford!" methinks I hear the reader exclaim; "why, it must be very dull there on Christmas-day, for all the men have gone down to their happy homes, and I should think there are only the few there who are obliged to stay."

Partly true, and true of most men, is thy thought, gentle reader. The Oxford stage-coach—last of its race—and the train from Oxford, have been filled, during the few days preceding Christmas, with the young and happy ones, returning where

"Kindly voices greet  
The tired ones at the door."

But still some are left; for "Use and Wont" have

"their yearly due" in one of the college halls of this city of colleges.

On Christmas evening Queen's College, Oxford, holds its high festival—not simply "a gaude," but the chiefest of all gaudies (if that be a lawful plural) of the year.

Picture yourself in the College Hall, or, for the nonce, possessed of the enviable power of ubiquity, so that you may follow all the proceedings. At the high table, which stretches across the upper end of the hall, are seated—in the centre the provost, and, on either hand, the fellows of the college. On this day no one, not being a member of the college, can dine with the Fellows—that is, at the high table, though an undergraduate may introduce his friends.

Above the high table are hung the portraits of the founders and other benefactors of the college. To the right of the provost appears Robert Eglesfield, the secretary of Queen Philippa, and founder of Queen's. Above him is Edward the Black Prince, who was educated here. To the provost's left are Queen Philippa, wife of Edward I., from whom the college is named; and, above her, Henry V., who also was educated here.

Around the hall are hung the portraits of others, benefactors of the college. The Hall itself is brilliantly lighted. The floor and the tables on either side are thronged with a crowd of people "gaping around." The gallery, facing the high table, is filled with a galaxy of beauty and fashion. It is computed that on the last occasion not fewer than eight hundred or one thousand persons were present. The approaches to the college are crowded so much, that visitors have to be admitted by a private door. The choristers of Magdalen, who come to sing, cannot make their way, and are let in through the provost's house.

Meantime, in the Butterly, facing the hall-door, the procession is formed. When all is ready, a path is cleared to the high table, and the provost and Fellows rise. The procession starts. First comes, borne on the shoulders of two stalwart men, the BOAR'S HEAD, weighing 60 lbs. It rests on a silver dish; its tusks are beautifully polished; the dish itself is garnished with bays and rosemary and gilt-leaved flowers. On the head rests a crown of velvet and gold, set in jewels. Around the crown are fixed eight silken flags, emblazoned with the arms of the college, and the boar's head. The boar has in its mouth the conventional orange. (Query, whence arose this custom?).

The boar's head is followed by one of the Fellows, who, in his turn, is followed by the chorus of sixteen voices. On gaining the entrance of the Hall, the procession stops. The Coryphaeus commences his solo:—

"The boar's head in hand bear I,  
Bedeck'd with bays and rosemary;  
And I pray you, my masters, be merry,  
Quot estis in convivio."

The chorus then commences, (using, it will be observed, with questionable propriety, the name of the Deity):—

"Caput apri defero,  
Reddens laudes Domino."

While the chorus is singing, the procession advances towards the high table, and then halts while the second verse is sung:—

"The boar's head, as I understand,  
Is the bravest dish in all the land,  
When thus bedeck'd with a gay garland.  
Let us servire cautico."

The chorus then comes in again:—

"Caput apri," etc.

The procession makes another halt while the last verse is sung:—

"Our steward hath provided this  
In honour of the King of bliss,  
Which on this day to be served is  
In Reginensis atrio."

The final chorus, "Caput apri," etc., brings the procession to the high table, on which the boar's head is deposited before the provost, who proceeds forthwith to the attack.

The procession having done its work, disbands, and the multitude disperses. The undergraduates come in and take their seats as soon as the tables can be cleared for them.

When the dish of the day has been fairly dealt with at the high table, it is sent down to the undergraduates, who speedily reduce its size; it is then removed, and the dinner comes on.

College duns probably take precedence even of "the Monks of Old" in their appreciation of good living. On this day, however, the undergraduates come in for a good share of their delicacies, not forgetting the old English fare of roast beef and plum pudding. On this day each person at the undergraduates' table is provided with a pint of wine. The senior commoner sends to the provost, requesting the pleasure of "wine with him." The provost rises, the undergraduates rise in a body, and the ceremony of drinking wine with their chief is accomplished.

Dinner over, grace is said, and there is brought in the "grace cup"—an enormous horn, said to have been presented to the college by Queen Philippa. Its stand and mountings are of solid gold. The handle of the cover is in the form of an eagle—the college bird. The cup contains a mixture of wine and spices, which is extremely palatable. The receipt from which it is prepared is carefully treasured up, and a large sum asked for its disclosure. The cup, like the "tappit hen" of Scottish song, holds three quarts of the precious beverage! It is carried first to the Fellow on the extreme right of the table. He stands, and the Fellow to his left, and the extreme left of the table stand also, while he takes as long a draught as his *watched* position allows; the cup is then passed round, with a continuation of these formalities. Having completed the circuit, it is, if needful, replenished and passed down to the undergraduates. When these have drunk, the cup is borne from the hall, and the festival is over. It is believed to be as old as the college, and is known to have been an "old custom" three hundred and fifty years ago! Its origin, however, is not known.

**KNEELING AT WORK.**—A clergyman observing a poor man by the roadside breaking stones with a pickaxe, and kneeling to get at his work better, made the remark, "Ah! John, I wish I could break the stony hearts of my hearers as easily as you are breaking these stones." The man replied, "Perhaps, master, you do not work on your knees."

## GEORGE STEPHENSON.

PART II.

GEORGE STEPHENSON had no means of bringing his great invention prominently before the notice of the public. He was still an unlettered, inexperienced man; and although success had gained him many friends, who had confidence in his powers, none of them had sufficient importance to bring his discoveries prominently forward. Besides which, Killingworth Colliery lay far away from London, where the new steam carriages were exciting great interest. And so, for eight years, Stephenson's engines were doing their hard work daily upon the Killingworth railway unnoticed, and had ceased to create any curiosity in the neighbourhood, long before the world beyond knew of their existence, and of Stephenson's solution of the problem which had engaged so many minds. It is very difficult to account for this neglect, or for Lord Ravensworth's silence, nor do we remember that Mr. Stephenson ever endeavoured to explain either; but so it was, even so late as the year 1826, when the keenly felt want of better communication between the cotton capital of the world, Manchester—and its sea-port, Liverpool—rendered a tramroad between the two cities indispensable. The battle of the steam-engine, as the motive power, had still to be fought and won.

We have seen how George Stephenson's anxiety to economise labour in the transit of the coals from the mouth of Killingworth pit to the Tyne, led to his adopting steam instead of horse power. Mr. Smiles tells us that the germ of the modern railroad is to be found in the rude wooden rails used so far back as two hundred years ago for the guidance of the coal wagons; and asserts that, but for the difficulties experienced in conveying the coals from the pits to the nearest places of shipment, our present gigantic railway system could never have been perfected. A century ago, these wooden railways were in general use in the north of England and in Scotland; and it was upon one of them that sleepy General Cope planted his cannon at the fight, or rather flight, of Preston Pans. A few years later, iron rails were adopted in the stead of wood, along which the lines of wagons were drawn by horses. So that when George Stephenson harnessed "Blucher" to his coal-cars, and succeeded in drawing them slowly and laboriously to the Tyne, he and the eager lookers-on assisted, all unconsciously, at the birth of the present great railway system.

The earliest railway for public traffic in England was one which the writer of this article remembers well, running from Merstham to Wandsworth. It was then lying forgotten and unused beside its great offspring, the South-Eastern and South-Western railways, which swept proudly past it; but when the necessity of better communication between the great towns of England began to occupy the public mind, and a system of tramroads was eagerly discussed, its projectors had no better precedent to guide them than this little railway, with its small trains of coal and stone cars, dragged leisurely by lean sluggish mules. Guided by this, however, speculators began to advocate the formation of main lines between the principal towns of England, and the subject excited considerable

interest. Among the most prominent were the projectors of a railway between the port of Stockton and the collieries of Darlington, who, with considerable difficulty, succeeded in passing the first railway act in the year 1821.

Meanwhile, George Stephenson, watching these projects with keen interest, was busy enough at Killingworth. While the projectors of the Stockton and Darlington railway were planning a new tramroad for horse power, George Stephenson was making railroads, and building locomotives with which to work them. Encouraged by the success of the Killingworth railway, the owners of a neighbouring colliery at length determined to adopt the same system, and commissioned Stephenson to lay down a line to the Tyne. And this successfully accomplished, and five of his locomotives, or iron horses, as the people termed them, working regularly upon it, George Stephenson turned his attention to the Stockton and Darlington railway, then in process of construction.

One morning there came to the house of Mr. Pease, of Darlington, the chief projector of the new railway, two strangers; one of whom, in the rough Northumbrian dialect, and with a straightforward manner, stated himself to be "only the engine-wright at Killingworth," but described his mission in far more confident terms. He came to say that the locomotive engine he had been using for many years at Killingworth was worth fifty horses, and to urge Mr. Pease and his brother directors to adopt it, in preference to horse power. And when Mr. Pease could not conceal his astonishment at the Northumbrian's proposal, Stephenson said simply, "Come over to Killingworth and see what my 'Blucher' can do; seeing is believing, sir;" and, having made the wished-for appointment, the struggling hero quietly returned to his home.

So satisfied was Mr. Pease with the character he obtained of George Stephenson, that he did not wait for the inspection of his engine, but brought his proposal at once before the directors, and obtained their assent to his being employed to survey the intended line of railway. And Stephenson's report having been duly made, Mr. Pease paid "Blucher" an unexpected visit, who was duly harnessed to a train of wagons, and made to show his paces. This was so much to the visitor's satisfaction, that he entered at once into partnership with Stephenson for the establishment of a locomotive manufactory at Newcastle, and obtained him the appointment of engineer to the Stockton and Darlington Railway Company, at the salary of £300 per annum.

Henceforth a new life began for George Stephenson, upon which he entered keenly and heartily. From this time we trace his career by one great success after another, until the public, slow for years to discover the talent of the humble engine-wright of Killingworth, acknowledged him as one of the foremost men of his day. Not that his progress was very rapid, or that fewer difficulties beset his path. Never, perhaps, was his old quality, perseverance, in greater request than now. For by the large majority of mankind he was still regarded as a hair-brained enthusiast, and in schemes considered visionary and dangerous. The opposition made by many landowners to his surveys for the new railway were at the time

serious, although they now appear ludicrous. Men of high rank encouraged their tenants to resist the entry of Stephenson and his assistants upon their farms, and in some instances armed their gamekeepers and servants to oppose them, while the labourers were incited to treat them as invaders, with every species of ignominy and violence. They were frequently ill-treated, their costly instruments destroyed, and their labour suspended. But all these difficulties were finally surmounted, and in the year 1825 an immense crowd assembled to witness the ceremony of opening the first important railway in England. No one seems, then, to have given a thought to passenger traffic; but after a period an old stage coach was bought, mounted upon a frame, and drawn by a single horse, at the rate of ten miles an hour, between the two towns; and in time others were added, although it was some years before the locomotive was employed to convey them, Stephenson's engines being used exclusively for the coal traffic.

Many of Stephenson's assistants are alive, who can remember him at this critical period of his life. Whatever anxieties and doubts he may have had, they never seem to have affected his untiring industry and hearty *bономм*. In the company of his son, he would start early in the morning, during the progress of the railway, taking with him in his capacious pocket a piece of raw bacon and a hunch of bread, and trusting to some friendly cottager cooking this humble dinner. The farming people, when they knew him better, grew to like him, and many who had turned out with pitchfork or gun to warn him off their lands, welcomed the gay hearty man who deigned to romp with their children and amuse them. And his day's work over, he would visit Mr. Pease, talking over the railway's prospects, or entertaining his daughters with tales of his early life—for he was above all false shame—or conversing upon grave topics, with an earnestness and originality which won for his opinions respect and attention. By his workmen he was liked, and yet revered and obeyed. "As he respected their manhood, so did they respect his masterhood." He had learnt the art of ruling others long ago, when, amid all the difficulties and dangers of his early life, he had learned to rule himself.

We have not space to follow his subsequent career closely. Appointed a surveyor of the Liverpool and Manchester railway, he encountered and overcame the difficulties similar to what he had already encountered. Describing his survey of the Bridgewater property, he said: "I was threatened to be ducked in the pond if I proceeded, and of course we had to make a great deal of the survey by stealth, while the people were at dinner. We could not get it done by night; indeed, we were watched day and night, and guns were discharged over the grounds belonging to Captain Bradshaw to prevent us." Nor were these all. Vested interests, in the shape of monopolist canal companies, being endangered, raised the fiercest opposition. Pamphlets were written, and newspapers hired to revile the scheme. It was stated and believed that the locomotives would prevent cows grazing or hens laying—that the poisoned air would kill birds as they flew over the chimneys

of the locomotives, and render the preservation of game impossible—that houses would be burned down or rendered uninhabitable from the smoke—that the use of horses would cease, and the race become extinct—that travelling on the deserted highways would become dangerous, and country inns be ruined. The bill met with the most virulent opposition during its progress through Parliament, Stephenson undergoing an examination of several days' continuance, conducted by barristers (three of whom afterwards sat upon the bench) unequalled in violence and enmity. Even his friends believed his enthusiasm for his locomotive engines excessive, and the counsel for the railway company declared somewhat roughly, that if he estimated their speed at more than ten miles an hour, he would ruin the Company's prospects and qualify himself for a cell in Bedlam. By engineers of fame brought to oppose him, he was subjected to many insults; and hints of his honesty and sanity were freely dropped even by the members of the Committee, when, in reply to his adversaries' taunts, he declared, in his rough Northumbrian dialect, that he could easily make his locomotives go at the rate of twelve miles an hour. "And suppose," asked an astonished and indignant member, "and suppose that a cow were to stray upon the line, and get in the way of your engine—would not that, think you, be a very awkward circumstance?" "Yes, very awkward indeed—for the coo," was the answer, with a dry laugh; but although he might jest, his heart was heavy. "I had not," he said, years after, "one engineer in all England upon my side." He stood alone, a simple country mechanic, against all the wealth and professional talent of England; but although he was worsted for a time, his darling idea—like all great truths—in the end prevailed.

Never had his prospects seemed more uncertain than at this time. The bill was rejected; and although in the following year the directors applied to Parliament with success, yet the statements of Mr. (afterwards Baron) Alderson, that Stephenson's plan was the most absurd scheme that ever entered into the head of man to conceive, had the effect of inducing the unthinking public to regard him as an ignoramus and a maniac, and of weakening the faith of his friends. The new survey was made by other engineers; the new bill waived expressly the question of the employment of locomotive engines, and indeed it was tacitly understood that horse-power alone would be used. Ultimately, however, George Stephenson was again appointed the Company's principal engineer, at a salary of £1000 per annum.

We cannot follow him through this new work, commencing with the construction of a road across the celebrated Chat Moss, and ending with the tunnel beneath Liverpool. We must pass on to notice the great battle he was called upon to fight on behalf of his locomotives. The line was nearly constructed before the question was fairly mooted, How should the line be worked? Stephenson, who had now only to deal with a board of directors, strongly urged his despised and rejected plan, pointing with confidence to the engines at use at the Killingworth, Hetton, and Stockton and Darlington railways. Others advocated the use of fixed engines; while many still held out for

horse-power. Two of the first engineers in the kingdom, employed to inspect Stephenson's engines, reported against them; but at length the directors were persuaded to offer a premium of £500 for the locomotive engine which should, on a stated day, perform certain conditions in the most satisfactory manner.

The scientific world laughed and shrugged its shoulders; but George Stephenson and his son calmly set to work, and, by the appointed day of trial, the famous locomotive, "The Rocket," built at Newcastle, was ready to compete with the three other engines entered for the prize. The trial was a short one, but it solved the problem beyond doubt or dispute. One of the competitors failed to start; another got out of order, and broke down; the boiler of a third burst; but the "Rocket" ran twenty-nine miles in the hour easily, to the wonder and delight of an immense crowd, and won the prize. Up to the very hour of trial, George Stephenson could not have been certain of success; but now the sneers and opposition of the whole scientific world were plainly answered; all doubt was at an end; the Company's shares rose ten per cent. in a day; and a great revolution had been effected.

We have now carried the reader through the most eventful and interesting portion of George Stephenson's career. Henceforth achievement followed achievement rapidly, and the world loaded with respect and honour one who, having begun life a poor uneducated boy, had by perseverance done more to advance the civilization of the world than any living man. His bitterest enemies bowed down to his genius, and gladly served under him; while many of them, taking advantage of his discoveries, became engineers of railways and manufacturers of locomotives. And, before long, the very men who had opposed him most confidently, and ridiculed the idea of an engine's speed exceeding ten miles an hour as presumptuous and insane, proposed to propel it at speeds which Stephenson, in his turn, and with justice, derided.

Business flowed in upon him and his son rapidly. Directors eagerly courted their services: their time was spent in constructing tunnels through clay, quicksand, and rock, carrying the iron roads over deep valleys and swift rivers. They gathered around them a band of assistants, whose labours have benefited every civilized nation; and when the elder Stephenson retired to comparative ease, although not to inaction, in the year 1840, his claims to public gratitude and reverence were fully conceded.

In his retirement, his thoughts were often with the workers, from whom he had ascended. He was always ready to aid in the formation of a mechanics' institution, or to give advice to individual members of his old class. He drew upon himself a flood of correspondence from all parts of the kingdom, by offering to investigate every working man's invention submitted to him. He was never weary of addressing them on his old favourite text, "perseverance," detailing his early life, his struggles, and his triumphs.

The railway mania, productive of such fearful results, withdrew him from his seclusion, although he held comparatively aloof from it. He might have realized a large fortune, as many did; but

he refused. Wealth obtained without labour seemed to him to savour of dishonour. It was impossible for him not to take an active part in the development of the great system which he had founded; but from the wild and shameful saturnalia which ensued, none held aloof more scrupulously than George Stephenson; and, when the inevitable end came, neither blame nor rumour of blame ever fell upon his integrity and honour.

Withdrawing himself almost entirely from the active pursuit of his profession, Stephenson now devoted his time to the care of his extensive collieries, and resumed those amusements which formed the recreation of his youth. As, forty years ago, he had surpassed the villagers of Killingworth in the growth of leeks and cabbages, so now he entered keenly into horticultural competition with his country neighbours; and the man who had fought the battle of the locomotive, bent his mind to excel in the production of melons and pine apples. He surrounded himself with dogs and other animals, began again to keep rabbits, renewed his familiarity with the birds he loved to watch and study when a boy, and amused himself by inventing novelties for use in his farm and gardens. Occasionally he turned his attention to his favourite locomotive engines, and, still aiming at perfecting the system which he had originated, designed several improvements, which were gladly adopted.

Death overtook him while engaged in these peaceful pursuits, and summoned him to leave the world he had so greatly benefited, before his faculties were decayed or his energy considerably weakened. An American writer, who saw him in 1847, remarked upon his healthy look, and observed that he still had apparently the lives of many men in him; but before the expiration of another year, the brave heart was stilled for ever.

His work-peopple, by whom he was loved and admired as a kind and just master, crowded to his funeral. "No generals," says Mr. Smiles, "were ever more loved by their soldiers than were the Stephensons, father and son, by that great army of men who worked out their gigantic projects." Testimony like this is better than worldly rank and titles carved upon his tomb. And knowing this, George Stephenson refused all offers of nobility pressed upon him in his old age, and died, as he had lived, "one of Nature's gentlemen."

The lessons of the value of industry and application which such a career as Stephenson's carried along with it, are too obvious to require enlarging upon. We do not promise to all working men who shall husband their resources and apply their powers as he did, a similar social elevation, but "by aiming"—to use a proverbial phrase—"at a silk gown, they will gain a sleeve of it." Perseverance and intelligent industry will certainly procure a working man a better status than he previously enjoyed, and will at all events advance him to the front rank of his own class. Now, in the attainment of such an object there is no better help than true piety. The self-denial, temperance, and industry which religion inspires, often become powerful levers and helps to a man's success in this world; for "godliness has great gain, having the promise of the life that now is, as well as of that which is to come."

## THE CLOSE OF A YEAR.

YOUTH welcomes the advance of time with eagerness. It speaks to him of progress towards a desired goal, and his bosom swells with generous aspirations. The eye kindles as it catches a glimpse of great struggles in life. He shrinks not from meeting them. Confident in his own resources, and encouraged by inspiring examples familiar to memory, he hails the approach to manhood as opening to him the high road of successful ambition. There is a buoyant faith and elastic energy in youth which clothes the future in roseate hues.

Men of middle life note the close of a year with soberer feelings; solicitude and misgiving mingle largely with hope. They have lost all desire to hurry the tardy movements of time, for the months now glide by swifter than the weaver's shuttle, and the year seems scarcely longer than a week in childhood. They have learned that life has its hours of sadness, that hopes are often blasted, and plans frustrated, and bright expectations end in disappointment. They look for each year to bring with it a cup of sorrows; the circle of loved ones may be thinned, and hot tears may flow over some dear friend borne to the silent grave. They feel, too, that their own sun has passed the meridian, and is sinking towards the horizon, and what is to be done on earth must be done quickly. Life has lost the rosy hues that once encircled it, and is recognised as a season of sorrow no less than joy, of duty equally with pleasure.

The aged often look at the closing year with aversion and ill-concealed terror. The recollections of the past are painful, neglected duties and innumerable sins give poignancy to the workings of remorse. They live in the past rather than the present, and it appears like a vast abyss which has swallowed up their youth, their early hopes and joys and friendships. They understand the full import of the sad words of Bryant:—

"Thou hast my better years,  
Thou hast my earlier friends, the good, the kind,  
Yielded to thee with tears,  
The venerable form, the exalted mind.

My spirit yearns to bring  
The lost ones back ; yearns with desire intense,  
And struggles hard to wring  
The bolts apart, and pluck thy captives thence.

In vain ; thy gates deny  
All passage save to those who hence depart ;  
Nor to the streaming eye  
Thou giv'st them back, nor to the broken heart."

Each year thins the broken circle of the friends of their youth, impairs their mental activity, multiplies bodily infirmities, and warns them to prepare for a speedy departure from earth. Age, to one who is not a Christian, is full of bitter regrets and gloomy forebodings, but the trustful Christian can rejoice in hope of forgiveness for the past, and in anticipation of the glorious morning which shall dawn after the sunset of life. Oh ! reader, does the close of the year find you a Christian or no ?

**FAULT FINDING.**—Having in my youth notions of severe piety, (says a celebrated Persian writer,) I used to rise in the night to watch, pray, and read the Koran. One night, as I was engaged in these exercises, my father, a man of practical virtue, awoke while I was reading. "Behold," said I to him, "thy other children are lost in irreligious slumber, while I alone awake to praise God." "Son," he answered, "it is better to sleep than to wake to mark the faults of thy brethren."

## Poetry.

## THE CHRISTMAS TREE.

Oh, many a clear blue eye is bright  
In many a German home,  
And the yule-lôgs high are piled this night,  
For our Christmas eve is come,  
And the steps are light and free,  
For every hand  
In the father-land  
Plucks fruit from the Christmas tree.

Now the mother's hand is hanging, light,  
Gifts high on the branching sprays,  
And the shining fruit and blossoms bright,  
A marvellous growth ! she lays.

Nor the dew-drop fair  
Shall be wanting there ;  
For many a sparkling gem  
From the silent cells  
Where the strong love dwells,  
Bathes softly the dark green stem.

And why does that mother the tear-drops shed,  
Like dew o'er the gifted tree ?  
The wandering son from her side hath sped  
To traverse the far blue sea.

Yet her love doth pour  
Its measureless store  
As forth from a deep, deep urn—  
And a lamp e'en now  
Is bright on his bough—  
Home's beacon to guide his return !

A brighter lamp on a broken bough  
The father hath silent hung ;  
A living gem on the dark trees' brow  
Those glittering gifts among.

And a chaplet there  
Of amaranth fair  
The clear light circles o'er—  
And lamp and wreath  
The whisper breathe,  
"Not lost—but gone before!"

When last they circled the Christmas tree,  
A voice, as the wind-harp clear,  
Made music with laugh and girlish glee  
They never again may hear.

Her step, it was light,  
And her eye was bright,  
Too bright for a mirror of earth ;  
It had caught the hue  
Of the heaven of blue,

In the home of her *second birth*.

Oh, many a heart bounds high and glad  
This night in the father-land ;  
And many a heart beats slow and sad  
Because of a sever'd band,

And a broken bough,  
Or a shady brow,

Or a faint and failing breath :

There's a blight on thee,

Thou Christmas tree ;

Alas, for the tree of Death !

Let us hang our hopes, like pearly beads,  
All over a deathless tree,  
That ever its healing branches spreads

In the light of Eternity.

And our souls' deep love,  
Like a nestling dove,  
Shall hide from a word of strife ;

Bright offerings pour  
In a sunless store :

Joy, joy ! for the tree of life !

MISS BITHA FOX.